How we build Railway Bridges.—Passing through Isleworth the other day, we were surprised "above a bit," as they say in the west, to see workmen busily employed in taking down a brick bridge of three arches, which carries, or is to carry, if they can ultimately make it strong enough, the Staines and Richmond Railway, not yet opened. A well-known horticulturist of the neighbourhood, who happened to be passing at the moment, must have noticed the surprise with which we viewed the proceeding, for he stopped his grey horse, and said, "You will be more astonished when I tell you that this bridge has already been built *twice*, and if this be the way they manage the works on this railway, I may thank my stars I hold no shares." Some of those who do, may perhaps think it pertinent to inquire who pays for these arch-waggeries, the engineer, the builder, or the shareholders? It is a trap-ball regulation that "slips go again," but whether or not this hold good in railway works when the "going again" costs money, deponent knoweth not.

Hull Corn Exchange Competition.—Three designs were submitted to the Committee appointed to carry out the execution of the new Corn Exchange, namely, from Messrs. Lockwood and Mawson, Mr. C. Brodrick, and Mr. Niemann. The Committee had stipulated that the architects should confine themselves to designs for converting the present corn market into a fish market, and for erecting a corn exchange over the poultry and butter market; and required that there should be double staircases of easy access, both from Blackfriargate and Fetter-lane, with all convenient offices for such a market upon the same floor as the exchange. The plan selected was the one furnished by Messrs. Lockwood and Mawson, of Hull, and of which the following are some of the principal features:—The corn exchange is a parallelogram, measuring 188 feet by 40 feet, but by a recess obtained by projection over the fish market, the width, along one-third of the entire length, is increased to 50 feet. The light, introduced entirely from the north, is obtained by dividing the roof into nine compartments, placed across the building and supported by cast-iron arched girders. The fish market has a range of columns dividing the shops, and supporting a caved ceiling, with light in the centre. Air is introduced by open arches springing from the columns, as well as by apertures left in the ceiling and roof. A fountain occupies the centre of the market, to cool and purify the atmosphere. The estimated cost of Messrs. Lockwood and Mawson's plan was 3,800*l.*; but by suggestions of the committee the cost is to be reduced to 3,500*l.*

New Schools, St. Dunstan's in-the-West, London.—The plot of ground at the Fleet-street end of Fetter-lane is to be occupied by schools for the parish of St. Dunstan-in-the West. The first stone of the new building was laid by the (late) Lord Mayor, Sir James Duke, on the 3rd inst. The building is to be faced with red brick, and the door-ways of Portland stone. It is to consist of two floors and an attic over. The school on the ground-floor is intended to accommodate 100 infants, and that on the first story forty boys; while the attic will be fitted up with all necessary conveniences, in order to make it a comfortable residence for the infant schoolmistress. The plans have been prepared by Mr. John Shaw, and the builders are Messrs. Locke and Nesham.

How Ironfounders dipper.—To show that builders are not the only blind ones in estimating for work, I hand you a list of tenders that were sent in for the erection and completion of a gasholder, tank, and purifier, at Ilford, Essex. W.

Crosskill	£565
Horlock and Co.	510
Headly	472
Middlemist	430
Helsham	362
Woolcott	347
Gilks, Worsdell, and Co.	350
Cottam and Hallam	328
Graysbrook	325
Gray	314
Crossly, Son, and Co.	310
Barlow	300
Westwood and Wright	297
Hogarth	256
Deeley, Whitechapel (accepted and completed)	184

Edinburgh Philosophical Institution.—Professor Wilson, the president, opened this institution in Queen-street Hall on Tuesday week, with an eloquent address, in which he deprecated the unqualified meaning usually put upon those celebrated sayings, the one, of Pope, that a little knowledge is a dangerous thing, and the other, of Bacon, that it inclines man to atheism. In the former he showed that Pope alluded to critics; and in the latter that Bacon alluded to the exclusive study of second causes. Yet Bacon "is not undervaluing them, provided they are conducted in a proper spirit; he says that if there is danger at all, it is in over-little—a most different view that from that generally taken of it." In conclusion, the professor referred to a great deal having been said of the re-action of knowledge on the human faculties; and he at once admitted that re-action was not always good; that where it led to self-exaltation it was positively bad: but that where it made the mind greater and better, and led an individual to attribute all his gifts and attainments to the Almighty—the bestower of all blessings—it was decidedly good.

Hertford Corn Exchange.—In consequence of the great inconvenience arising from the want of proper accommodation for the merchants, farmers, and others attending the corn-market here, it was thought desirable by a majority of the town council and influential inhabitants to provide a commodious corn-exchange. The building (which we have not seen) is situate in the principal street (Fore-street), and near to the Shire Hall. The design was furnished by Mr. D. Hollingsworth, the borough surveyor, and the building was contracted for by Lawrence, Son, and Castle, of Hertford, for the sum of 391*l.*, exclusive of the fittings, &c., for the merchants. The dimensions of the building, according to our informant, are as follows:—Length, 66 feet 6 inches; width, 43 feet 6 inches; height, 15 feet to the under side of girders. In the centre is a lantern 40 feet by 15 feet (supported by eight hollow cast-iron columns), and constructed upon upright sashes, furnished with Hurwood's patent apparatus. Ventilation is effected by the sashes in the lantern, and six large skylights in the sides of the roof, the whole of which is covered with rough plate glass. The exchange was opened on the 20th inst. Out of thirty-eight stands, thirty-two have been let at various rents, from 3*l.* 3*s.* to 4*l.* 10*s.* per year.

The Cards of Invitation and Admission to the Coal Exchange shewed considerable care, and some taste. The first, a solid enamelled card, presented an engraved view of the exterior of the new building (perspective of which, by the way, was questionable), and the admission ticket forwarded on the invitation being accepted, was on lace paper, with a coloured group of fossils in the centre, and a map of part of the city on the back, to guide such of the west-enders as were ignorant of Billingsgate. We have to thank Mr. John Wood, the active chairman of the committee, for more attention than we have heretofore received from city authorities.

Playing on the Pipes, by the "Times."—Pipes appear to be the order of the day. Pipes to let pure water in—pipes to carry foul water out;—pipes for warming—drainage—ventilation;—pipes to bring in gas for burning—pipes to carry off the products of combustion. Pipes to the rich man's marble bath-room—pipes to the poor man's brick-paved kitchen;—pipes for the fountains of St. James, and pipes for the stinking cesspools of St. Giles. For ornament and pleasure—for economy and cleanliness—for health and comfort—for arresting conflagration, and extinguishing pestilence—pipes! The whole sanitary question, indeed, may be regarded as little more than a question of pipes.

Disinfecting Power of Chlorine Gas.—With reference to Collins's disinfecting powder, the inventor asserts that, having a glass globe holding about 900 cubic inches of air, he added to this air one cubic inch of sulphuretted hydrogen gas; he then placed a sparrow in it, which was deprived of life almost instantly.* He then introduced into this poisoned atmosphere of the globe about half a tea-spoonful of his disinfecting powder (the properties of which are derived from its evolving free chlorine by the simple absorption of moisture), and at the expiration of two minutes introduced another sparrow, and after this had remained in the globe ten minutes it was withdrawn, and found to have suffered no injury from its exposure to this atmosphere.

The Vernon Club.—The formation of an artistical and literary club under the above title is in agitation. If under good auspices, and well managed, the scheme could scarcely fail to succeed.——Behnes has just finished the bust of Mr. Vernon intended for the vestibule of the National Gallery.

The Preservation of Life from Fire.—As a means of preserving life and property from fire, I would suggest attaching an air-pump to a fire-engine, to be worked at the same time, or as occasion might require. To this pump I would attach a light elastic tube, to be fixed to a fireman's hood or covered helmet, in order to enable him to enter a room when filled with a dense suffocating smoke, to rescue persons who would otherwise have perished, or save valuable property from the flames. The fireman's dress and helmet I would form of asbestos, or some other material which should be impervious to fire; as also the elastic tube, which should be cased with a similar material, to prevent its being affected by the fire, and it could be made of any length. On mentioning my suggestion to others, I was informed a similar plan had been invented by Mr. Deane and Col. Paulin. The same simple contrivance might be adopted for entering a foul sewer, which at all times is exceedingly dangerous, but by means of a small air pump, with a coil of tubing, it might at all times be made available, and at a trifling cost.

W. Westmacott.

*** The suggestion as respects entering sewers was made in our columns some time since.

* This is in the proportion of one table-spoonful of sulphuretted hydrogen to 24 gallons of air.

MEETINGS OF SCIENTIFIC BODIES

Held during the ensuing week.

Tuesday, Nov. 13.—Freemasons of the Church, 8 p.m.

Thursday, 15.—Society of Antiquaries, 8 p.m.

TENDERS

For that portion of the East and West India Docks and Birmingham Junction Railway lying between the Lea Cut Canal and Blackwall; Mr. Martin, Engineer.

Godson	£53,891
Jay	53,504
Hayton	53,079
Murray	52,838
Douglas	51,737
Hicks	51,670
Jones	51,646
Wythes	50,162
Wallace	50,075
Nowell	49,748
Favell	49,679
Curtis	48,751
Warren	48,000
Lee and Son	47,681
Brassey	47,300
Evans	46,744
Pauling	46,374
Smith and Pearce	45,963
Rolt	45,632
Goodison	45,218
Waring	45,108
Pauling	44,009
Boulton	44,963
Diggin	44,475
Knight and Son	44,250
Thos. Jackson	43,940
Furness	43,899
Howe and Jones	43,479
Price	43,413
Scissons	43,318
Rigby	43,230
Earle and Comb	42,501
Gregson	42,356
Adamson	42,276
Hutchings	41,958
Healey	41,370
Jackson	40,962
Bray	40,921
Warwick	40,616
Tredwell	40,377
Trego	39,643
Pickering	39,509
Ritson and Hutchinson	38,548
Myers	37,932

[Difference, only 16,859*l.*]

For the proposed Corn Exchange, at Brigg, Lincolnshire; Lockwood and Mawson, architects.

Warden and Littler	£1,679	3	9
Johnson, S. and R.	1,500	0	0
Wallis	1,358	0	0
Dent	1,525	0	0
Wright	1,485	0	0
Clark and Gosford	1,439	10	0
Hockrey	1,400	0	0
Miller	1,394	0	0
Thompson	1,392	0	0
Leggott	1,330	0	0
Fewster	1,319	0	0
Wass	1,279	0	0
Thompson and Jarvis	1,278	6	0
Margeson (accepted)	1,227	0	0
Clark	1,151	0	0